Franklin Ma

✉ franklinming.m27@icloud.com   in franklinma27   ⦿ terwo   ⊕ franklinma.me

EDUCATION

University of British Columbia   Sep. 2020 – May 2025
Bachelor of Arts in Cognitive Systems   *Vancouver, BC*
- Societies: Japan Career Network, Cognitive Systems Society, Tandem Language Exchange, NLP Reading Group

University of Tokyo   Sep. 2022 – Aug. 2023
USTEP Exchange Program   *Tokyo, Japan*
- Societies: Komaba Association for Children, Piano Club, Volleyball Club, Cloud9 Snowboarding

RESEARCH

Undergraduate Research Assistant   Sep. 2024 – Present
UBC Speech, Language, and Interactive Media Lab   *Vancouver, BC*
- Investigating training methods for LLMs to learn low-resource languages from grammatical descriptions and language samples
- Designing and implementing prompting strategies for language models to enhance transcription of atypical speech through direct preference optimization methods like SimPO

Applied AI Team Member   Sep. 2023 – Present
UBC AgroBot   *Vancouver, BC*
- Developing computer vision models like YOLO and Faster R-CNN for agricultural applications using PyTorch
- Researching automated disease detection in viticulture, and time-to-ripeness for blueberries

Student Researcher   May 2024 – Aug. 2024
UBC Human-AI Interaction Lab - NSERC USRA   *Vancouver, BC*
- Refactored a User Modeling and Adaptation framework for improving extensibility to new Exploratory Learning Environments and implementing WEKA Machine Learning Algorithms in Python
- Implemented PCA to enhance clustering efficiency for high-dimensional data and Bayesian optimization for hyperparameter tuning

TEACHING

Undergraduate Computer Science Teaching Assistant   Sep. 2021 – Present
UBC Department of Computer Science – CPSC110 (3x); CPSC210; CPSC320   *Vancouver, BC*
- Answering questions during lectures while sharing design approaches for a 3rd year course on algorithms
- Hosted office hours and coached students on functional programming and OOP (Java) for 1st and 2nd year courses
- Administered interactive labs with 30+ students, both guiding their learning and evaluating their code

Undergraduate Japanese Teaching Assistant   May 2022 – June 2024
UBC Department of Asian Studies – JAPN100; JAPN200   *Vancouver, BC*
- Conducted speaking drills with 30 students in introductory Japanese courses to elevate conversation skills
- Evaluated 300+ assignments and formulated constructive and personalized feedback every week
- Corresponded weekly with the professor to brainstorm how to improve delivery of content and evaluation practices

English Conversation Tutor   Oct. 2022 – July 2023
Ouchi International   *Tokyo, Japan*
- Taught weekly one-on-one basic English lessons, either academic-based or leisure-based, to a total of 6 students
- Corrected students on pronunciation, sentence flow, and used mnemonics to guide their learning

Professional Experience

Project Assistant Co-op Student
UBC Cloud Innovation Centre

Sep. 2023 – Apr. 2024

Vancouver, BC

- Collaborated with ∼5 stakeholder teams from environmental organizations and other universities to develop open source AWS-based cloud initiatives that range from facilitating medical imaging to hindering invasive plant species
- Documented technical architecture and solution details to ensure transparency, enabling sponsors to easily build upon the proof-of-concept solution
- Led and organized the inaugural Cloud Computing x Generative AI Hackathon for 100 participants to empower them with the tools and knowledge to create innovative AI solutions

Software Developer Intern (Part-Time)
Fabrica Communications – Sparkle AI

July 2023 – Aug. 2024

Tokyo, Japan

- Implemented transaction tracking for a Web3 lottery platform and Firebase Analytics for a cryptocurrency transfer app to research user preferences
- Engineered a multi-threaded web scraping API deployed on Vercel to efficiently extract and organize data into a PlanetScale database for analysis with Business Intelligence Tools

Freelance Software Developer
DifferentMatters

Jan. 2024 – Mar. 2024

Remote

- Conceptualized and implemented from scratch the DifferentMatters' community chat platform with Next.js, Tailwind CSS, React, and Supabase
- Integrated real-time messaging capabilities and maintained unique chat logs for all different user groups

Extracurricular Activities

Kodomo Kai Helper
Komaba Association for Children

Oct. 2022 – Aug. 2023

Tokyo, Japan

- Volunteered with students from the University of Tokyo and Japan's Women University to accompany ∼30 children from Komaba Elementary School on educational excursions throughout Tokyo

First-Year Representative and Executive
UBC Japan Association

Sep. 2020 – Apr 2022

Vancouver, BC

- Facilitated monthly welcome events for ∼150 incoming UBC students as First-Year Representative, and organized Japanese cultural events as a Cultural Team Executive to foster community and cross-cultural understanding

Conferences

BCNET CONNECT 2024 Tech Summit
Student Perspectives: Leadership and Learning in Co-op Experiences

Mar. 2024

Vancouver, BC

- Co-presented a talk about student insights on co-op experiences, leadership development, and work-integrated learning at the UBC Cloud Innovation Centre

Publications

The ONE – UBC Arts One Student Journal
Rankine and The Pronoun Dreamworld: The Creation of Compassion

Apr. 2021

Vancouver, BC

- Published analysis of pronoun usage patterns and their effects on reader perception in contemporary literature

Honors & Awards

Honors: Governor General's Academic Medal (Bronze), Dean's List (2021, 2022)
Research Grants: NSERC Undergraduate Student Research Award
Scholarships: Trek Excellence (2021, 2022), Hugh M Brock Go Global, Dorothy and Arthur Holt, UBC Faculty of Music Entrance Scholarship (Declined)
Competitions: Community & Connection Track Winner and Best Design (Northwest Hacks 2024), Best Sustainability Hack (StormHacks 2024)